DOCUMENT RESUME

ED 198 090 SP 017 267

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TITLE Adults as Learners: A Developmental Perspective.
PUB DATE Jan 79
NOTE 20p.: Paper prepared for a conference on "Exploring Issues in Teacher Education" (Austin, TX, January 10-12, 1979).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Development: Cognitive Development: Competence: *Developmental Programs: *Developmental Stages: Goal Orientation: *High Achievement: Higher Education: *Individual Characteristics: Inservice Teacher Education: *Maturity (Individuals): Performance Factors: *Self Actualization: Teacher Effectiveness

ABSTRACT

A review is presented of studies which examine the psychological predictors of successful adult performance, or life skill success. Scholastic achievement is generally regarded as an ineffective predictor of successful life performance. It is suggested that factors such as ego maturity and personal competence (developmental psychological characteristics) are responsible for differentiating between effective and ineffective performance. An accepted theory states that levels of psychological maturity and levels of conceptual development determine the quality of adult functioning. A multiple series of studies also documents that the effective versus ineffective functioning of adults in general and of adults in teaching is determined by the maturity-developmental level of the adult. Attempts are being made to create developmentally oriented education programs for preservice and inservice teachers. Appended to this paper is a discussion of the state of the art for a possible developmental approach to inservice teacher education. (JD)

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ADULTS AS LEARNERS:

A DEVELOPMENTAL PERSPECTIVE

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Prepared for conference on
"Exploring Issues in Teacher Education"
N.I.E. and R & D Center for Teacher Education
University of Texas, Austin
January 10-12, 1979

SP 017 267

Introduction

For a series of reasons, knowledge concerning the process of normal adult growth and development is in an infantile state. Theory and research in academic psychology has tended to focus on normal children and adolescents or abnormal adults. Thus we have elaborated theories on a comprehensive series of developmental domains in children and teenagers--carefully researched. Similarly in the area of adulthood we have an array of impressive clinical (Rorschach, TAT, et al) and empirical (MMPI) measures for indexing adult pathology. Also, assuming we're not too worried about validity, we have at least an interesting set of theories which explains pathological adult functioning. Valid or not, the journey of the id, the ego and the super-ego, locked in an heroic intra-physic struggle, is a fascinating modern day version of a pilgrim's progress. Whenwe turn, however, to adults in general, or adults in professions, we find a dearth of theory or research. When compared to the abnormal literature, the research/theory base for normal adults is both far smaller and much less interesting. Perhaps the Freudian determinism which indicates that adulthood is a recapitulation of the first five years has frozen theory for psychology of adulthood far too long. Certainly it took great effort by child developmentalists to free that field from the classic psychoanalytic frameworks. It may require at least equivalent effort to do the same for adulthood. What this all means, as background, is that the views presented here are of recent origin. The theories are emergent. The research is promising. The knowledge base quite incomplete. Tentativeness is the watchword.

A Developmental Perspective on Goals

A series of studies have appeared over the past decade which essentially call into serious question the usual educational goals. At the same time, these studies also suggest an alternative set of objectives. In other words, the findings cut two ways, pointing in a critical vein as to what is wrong while simultaneously indicating where we should be heading.

Although an admittedly difficult area to research there have been a number of studies which examine the psychological predictors of successful adult performance, or life skill success, as it is sometimes called. Since there are no as yet known "ultimate criteria" these studies tend to employ an array of outcome measures or proximate criteria. For example a 16-year study at Brown University (Ford Foundation sponsored) used indices such as listings in Who's Who, peer nominations, economic success, attendance in graduate school, etc. as outcomes or dependent variables. The predictors were then all the common intellectual, social status, and psychological variables. The results were most interesting. Measures of academic achievement and scholastic aptitude failed to predict adult success. Instead the psychological assessment of school personnel (principals and guidance counselors) on a subjective index of psychological maturity and "personal promise" was the most significant predictor.* This finding should remind us all of the classic Jersild-Tyler eight-year study in the 1930s and 40s which clearly pointed to similar conclusions. High school recommendations based on the principal/staff

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* The design was an overlapping longitudinal with large samples (Ns = 500) from classes in the 1950s and 60s. Also there was a major spread in SAT scores (150 pts.) in "at risk" candidates versus normally admissible. The results held for all classes studied (Nicholson 1970).

assessment of "readiness" and "maturity" were more potent as a predictor of general college performance (not just G.P.A.) than were grades or high school measures of intellectual potential.

Kohlberg, LaCrosse and Ricks (1971) reviewed a massive number of studies in search of predictors of adult success. Their negative findings were that providing emotional or clinical psychological treatment for children and adolescents had no positive effect upon adult performance. Similarly Kohlberg and Mayer (1972) reviewed major predictive/longitudinal studies of academic achievement and reached similar conclusions: namely, scholastic performance makes no independent contribution to life success measured by occupational or economic success, the absence of crime, mental illness or unemployment. As noted earlier such findings cut two ways. On one hand, "Put bluntly there is no research evidence indicating that clinical treatment of emotional symptoms during childhood lends to predictors of adult adjustment . . . " On the other hand, "The best predictors of the absence of adult mental illness are the presence of forms of personal competence and ego maturity during childhood" (Kohlberg, LaCrosse, and Ricks 1971 p. 1274). The same is true for academic performance. "It is hardly surprising to find that tests designed to predict only to the arbitrary content and demands of schools should fail to predict much to later life" and "in contrast assessments of development, like our moral judgement assessment do predict to life outcomes in job and family" (Kohlberg 1977 p. 28).

McClelland (1973) in a major analysis reached highly similar conclusions. He reviewed adult world of work in search of predictor variables. The range of jobs included the complex, such as medical doctors, research scientists, to technical, such as air controllers, and bank-tellers, to the menial, such as stockroom workers. In all cases academic achievement was

ineffective as a predictor of successful performance. Instead, McClelland suggested that factors such as ego maturity and personal competence--developmental psychological characteristics were responsible for differentiating between effective and ineffective performance. The construct of personal competence itself originated with Robert W. White in a classic paper delivered at the Nebraska Symposium on Motivation. White's paper (1959) outlined the need for psychology to adopt a new paradigm to understand and predict human behavior. He pointed out both the reductio ad absurdum of the Skinnerian black box as well as the fallacy of the overly-elaborated psychoanalytic theory. The latter attempted to create a conflict free ego sphere through the magic of de-libidinized energy as a basis for normal functioning. White clearly anticipated the emergence of an avowedly normal theory of adult growth in presenting personal competence as an intrinsic human drive.* An essential human function from this view is the need to grow toward competence, toward mastery, self-direction and personal efficacy.

The studies presented above most clearly point in the direction of developmental concepts as predictors of successful adult functioning. The usual variables of academic achievement or measures of traits including "intelligence" provide meagre information. On the other hand studies as far back as the Jersild-Tyler eight-year study, to the relatively recent investigations of the Brown Univeristy study, Kohlberg et al, and the McClelland reviews indicate the power and promise of a developmental orientation for differentiation, between successful and unsuccessful adult functioning.

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* The classic views of John Dewey and his use of the term "growth" would be an earlier version of this same concept.

Adult Functioning: A Developmental Perspective

The two presenters today, Heath and Ed Sullivan, have been engaged in both so-called basic and applied research, creating an impressive knowledge base from a developmental point of view. Heath's work at Haverford College concentrates on adults in general including a cross-cultural perspective. Sullivan's work has tended to focus more on adult functioning in a particular context. Along with David Hunt and other associates such as Clive Beck at the Ontario Institute, his work has examined and detailed effective versus ineffective performance of adult educators (teachers and counselors). Of course there are other obvious differences. Heath has tended to work as a single researcher without large staffs, numerous associates or large grants. Sullivan on the other hand, has had a close and productive relationship at the Institute with a model team. In spite of these obvious differences, there is a remarkable similarity to their outcomes.

Both Heath and Sullivan et al find that developmental concepts do provide powerful differential explanations for adult behavior. They will detail these shortly. Even though specific research methods and measurement techniques do vary, and their theories do not exactly correlate, their overall thrusts are congruent. The message is clear. Levels of psychological maturity (Heath's concepts) and levels of conceptual development (Sullivan et al) determine the quality of adult functioning. Heath can describe a complex series of adult behaviors which are derivatives of psychological maturity--allo centrism, the ability to symbolize experience, empathy, etc. The psychologically mature adult processes experience through such complex thought systems. Sullivan, on the other hand, can describe a similar set of effective adult teacher or counselor behavior which are also derivatives of complex conceptual and developmental stage processing. At higher more complex conceptual levels,

teachers and counselors are more "adequate" and competent. They can "read" individual differences in pupils, respond to both thought and feelings of children, are more democratic, less authoritarian, can vary structure, can employ a greater variety of teaching models (in the Joyce and Weil sense), etc. In short a multiple series of studies document that effective versus ineffective functioning of adults in general and adults in teaching is determined by the maturity-developmental level of the adult.

In addition to the work of our two presenters, I should add that confirmatory evidence is emerging from other research groups. At Kohlberg's center in Cambridge, Candee (1977) has investigated the role performance of physicians according to different developmental levels (in this case stages of social justice reasoning). The preliminary results indicate that physicians at principled stages (similar to Hunt-Sullivan stage 3.0 or higher and Heath's mature allocentric) function more effectively than colleagues at more modest levels. In this study, effectiveness was defined as a complex set of role-taking activities including empathy with patient, understanding basic patient human rights, high patient participation in decision-making, etc. The other physicians were more autocratic, prescriptive, stereotyped in perception (e.g., patients were categorized into crude demographic groupings). Candee also notes that a similar set of studies by McClelland and Klemp (McBer Associates, Boston, Massachusetts) provides confirmatory information from other professional fields. The McBer studies found major differences in groups as diverse as naval officers and diplomats on levels of empathy, the recognition of non-verbal cues and other estimates of role-taking skills. Superior performance was associated with advanced psychological development.*

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* Although I do not have access to the validation studies, the Selection Research, Inc. "Perceiver" method appears to assess different levels of psychological maturity as effective predictors of successful teaching and educational administration (SRI Lincoln, Nebraska).

In the Minnesota studies there is evidence to support the same general conclusions. In studies with pre-service teachers there were major differences in the use of direct versus indirect teaching styles (Flanders system) according to Conceptual Level and Moral Reasoning stage. Also, and by far more significant, was the finding that the effectiveness of the student-teacher supervisor was a function of developmental stage. High stage supervisors were more accurate in evaluating student-teacher performance than lower stage colleagues. In fact, low Conceptual Level and Moral Reasoning stage supervisors when "mismatched" with high stage student teachers erroneously evaluated the student teaching performance. High stage student teachers with effective (indirect Flanders ratios) ratings were negatively rated on a subjective basis by lower stage supervisors (L. Sprinthall 1978).

Thus the differences in role performance from adults in general to adults in specific complex occupations indicate a valid data base for the assertion that developmental stages or levels offer promise as predictors. In a larger sense these findings are also at least partly cross-validated from Witkin's work on cognitive rigidity-flexibility or what is often called perceptual field dependence versus independence. Although Witkin (1978) is not a cognitive-developmentalist, it does not require much imagination to see the logical relationship between stages of less complex cognitive stage functioning and field dependence, with the same for higher stage processing and field independence. The Hunt studies detailing the relation between high Conceptual Level stage and the ability to withstand brainwashing and the Kohlberg studies outlining high Moral Development stage and the ability to resist the Milgrim obedience demands provide further support.

In general then there is as I noted at the outset clear and promising emergent evidence connecting developmental stages with effective adult performance. With that established we can now turn to what needs to be done (with apologies to Lenin).

Promoting Adult Growth?

The logic is dangerously simple. If we have good reason to believe that more mature and higher stage adults can function more complexly then let's induce, stimulate, exhort, cajole, nurture and promote growth. If, as John Dewey would say, we know what development is then we know what the educational objectives ought to be. So let's get on with it.

Unfortunately (or fortunately depending on how you view human freedom) it's not quite that easy. Psychological maturity and development are obviously highly complex systems of human "inner behavior." Thus while the goals may be clear--developmental growth toward more complex systems of thought-feeling and action--how we do it is not. For the past four years at Minnesota we have been attempting to create effective developmentally oriented educational programs for pre-service and in-service teachers. The studies of pre-service (Hurt and N. Sprinthall 1976, Glassberg and N. Sprinthall 1978) and in-service (N. Sprinthall and Bernier 1978, Oja and N. Sprinthall 1978) indicate that adult "development" may be possible. It is, however, much more difficult than programs for children and adolescents. In studies with elementary and secondary school children summarized by N. Sprinthall and Ojemann (1976) and by N. Sprinthall and Mosher (1978), modestly positive developmental increases are reported. In the area of pre-service and in-service teachers, however, the initial results are mixed. My own view is that the problem of developmentally oriented pre-service and in-service teacher education is a major new area which needs careful study.

I also think that the concepts are worthy of such effort. If we are able to set up and support such a line of inquiry the benefits will accrue twofold. We shall increase our theoretical knowledge as well as our educational effectiveness. Stimulating the growth of an adult across a wholistic set of developmental domains can yield such dual outcomes. We are only at a beginning point now. As Hunt has noted however there may be grounds for optimism. "We believe that most earlier teacher training both pre-service and in-service has seriously underestimated teachers' potential for learning new approaches" (Hunt 1978).

A development education for teachers could represent a means for learning new approaches.

Summary

Schutes in an excellent article has detailed the need for an adequate theory for teacher education (1975). He correctly notes that a major longstanding difficulty in this area has been the lack of a coherent set of ideas and directing concepts. As a result research has tended to be brief, episodic, fadish, growing more like "Topsy" than as a profession illuminated by significant inquiry. The largely atheoretical history of past research efforts has yielded sparse benefits. Developmental theory, on the other hand, presents an interesting and sufficiently complex new paradigm (in the Kuhn sense) for teacher education that we should all examine carefully. As noted at the outset, the theory, or more accurately the theories are emergent. In addition to the two major theorists present at this conference there is an impressive list of colleagues (Kohlberg, Hunt, Loevinger, William Perry, Robert Selman, Henry Dupont) all working to detail aspects or domains of development. Such ideas can provide a footing or foundation for educational/developmental programs.

In a unique sense the developmental model suggests that we derive practice from theory and vice versa--that is, we can derive theory from a careful examination of practice. Practice is not a second-class activity for those too stupid to think at a theoretical level. Rather interaction means just that. Practice and theory go hand in hand. If we concentrate exclusively on either, both are diminished.

Thus the question, must we wait years for more basic research or can we now derive incomplete but promising models for instruction? To some degree, of course, such an answer depends on one's own view as to how knowledge is generated. The developmental epistemology suggests that interaction between theory and practice represents the generator. Following the Kurt Lewin framework, theory and practice are different sides of the same coin and reside in the real world not the laboratory. Since all behavior is a function of the interaction of person and environment (B-P-E), we are not exempt from the same laws. As a result I strongly urge tryouts of a developmental model for adults even though all the answers are not yet in from basic research; further that tryout field based experiments themselves are basic research from a developmental perspective. There is nothing so practical as a good theory as a Lewin would say. By carefully examing actual "best shot" practice we can more fully illuminate needed theoretical reformulations. Thus, although heretical, a basic developmental assumption is that the basic and the applied are not sequential but rather interactive. What we need, in any case, is clustered research and development groups to chart new paths and new programs.

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Appendix A

Toward an Instructional Model

The following summary of instructional issues was prepared for the Bureau of Education for the Handicapped and represents a section of a larger paper, "Adult Development and Leadership Training for Mainstream Education" by N. A. and L. T. Sprinthall.

The appendix presents a discussion of the state of the art for a possible developmental approach to in-service teacher education. It is intended as a supplement to the main themes in the Over-view and in the Special Papers. It is not intended to preempt a full and complete examination of the key issue--namely does a developmental conception of adult functioning improve our ability to understand and predict adult performance. Does this, then, become a significant goal for educational programming?

On the basis of current study with adult in-service teachers both at the University of Minnesota and at St. Cloud State University, and extrapolating from studies with elementary and secondary school children, a developmental approach includes the following elements:

1. Growth toward more complex levels of cognitive-developmental functioning appears to be most influenced by placing persons in significant role-taking experiences. There is a substantial difference between role-playing (simulation, games, fantasy trips, et al) and actual role-taking. In the latter case the person is expected to perform a new and somewhat more complex interpersonal task than one's own current preferred mode. The experience is direct and active as oppossed to vicarious and indirect. For example with teenagers role-taking involved a pupil actually learning to counsel a peer, or teaching junior high pupils, or "co-teaching" in a nursery school. For pre-service and in-service teachers role-taking involves teaching them counseling skills and/or supervision skills, or to employ new teaching

"models." Kevin Ryan some years ago suggested the concept of cross-role training or role-taking for teachers. Although never formally implemented the idea still seems valid, namely that educating professionals through direct yet multiple professional roles might surely act as a stimulus to growth.

2. A second consideration concerns the qualitative aspects of such experienced-based role-taking. Obviously as Dewey noted long ago there are major differences inherent in what anyone can learn from experience. A philosophical truism in the 19th Century noted that a game "push-pin" was not the same as "poetry." From an experiential point of view working at the Rub-A Dub-Dub Car Wash may not be equivalent to teaching a blind retarded child to swim. What we need to chart is the learning potential implicit in particular kinds of experience--role-taking that is neither beyond the reach nor below the grasp of an individual learner. Role-taking could be a significant educative or mis-educative activity depending upon the calibration or the experiential "match."

Developmental stage differences imply major differences in the initial ability to role-take. For example in some of the school studies, it was clear that the developmentally less mature junior high pupils could not work effectively in a relatively unstructured pre-school (Preuss 1976). On the other hand children in that same age and stage range could work effectively in a more highly structured cross-age teaching assignment in a traditional elementary school (Enright 1976). At least based on clinical evidence it appears as if teachers at modest Conceptual Levels have difficulty understanding and accepting why they could employ common counseling techniques for small group instruction for mainstreamed classes. Such a role-taking experience may not be appropriate at least at the outset for these teachers.

3. In addition to "real" experience there is a genuine need for careful and continuous guided reflection. In a Dewey sense this means that unexamined experience misses the point. However, we have found that it requires (almost) an inordinate commitment to this concept to make it work. Apparently the general educational enterprise rarely teaches anyone how to reflect upon real experience. Vocabulary seems to vary from the minimal to the nonexistent. In a series of secondary school classes most teenagers seemed to believe that "wow, sad and dynamite," represented the complete thesaurus for human emotions. If pre-service or in-service teachers are asked to keep a journal, the results are usually meagre at best. As a result it seems that teaching persons how to ask questions, examine experience from a variety of views, etc. is at least coequal to real experience as a growth stimulus. Naturally there are always some in each group who, for whatever reason, are reflective, yet for the majority structured learning seems requisite to promote rigorous examination.

4. Related to the above points is the need to create some balance between the real experience and discussion/reflection/reacting. Research with teenagers seems to indicate that tremendous amounts of experience do not yield or have greater impacts than more modest amounts. In a peer teaching program, tutoring two or three hours per week was as effective as 10 to 12 in effecting the level of psychological maturity as long as there was a weekly seminar. Without the guided reflection there was no discernible effect on volunteer-only tutors (Exum 1977). A current study in elementary schools indicates that with peer teaching ("regular" children and TMR's) the same findings hold to an even greater degree. Under supervision that is careful and continuous the regular children develop more effective role-taking and empathy skills. Under volunteer-only conditions with

minimal supervision the "regular" children became more negative toward and critical of TMR's! (Blum 1978). Bruininks (1978) also found that under the random conditions in most classrooms "regular" children accorded mainstreamed children increasingly lowered social status. In some sense this may be only the most recent example that experience by itself may be educative or mis-educative. It is certainly clear that a main element must be a genuine balance between experience and reflection. Guided integration appears essential.

5. Programs need to be continuous. This is perhaps overly obvious. A single 3 credit course will rarely provide a sufficiently in-depth experience to produce significant change. The follow-up studies noted earlier (McAuliffe's 1976 review of human-relation training "packages") plus the national study by Joyce, Yarger and Howey clearly document the ineffectiveness of brief, episodic, weekend "type" learning. The time line for significant change probably should extend over at least one year period. In one of our projects (Oja and N. Sprinthall 1978) we found that grouping or clustering teachers by school building make it more possible to provide continuous supervision on-site while teachers were asked to transfer their newly learned teaching models to their own classrooms. Much has been written by Miles and others on the relative isolation of classroom teachers. Such an environmental factor may indeed influence why so little new learning transfers. Without continuity during both the acquisition and transfer phase, new instructional techniques may be placed quickly into desk drawers on top of new curriculum guides. Thus, as a result, both new techniques and new content quietly gather dust.

6. Since developmental stage growth represents by definition functioning at a new and more complex level, instruction needs to provide

for both personal support and challenge. The general role of the leader must include. at a minimum, the ability to model a variety of teaching models. However, by itself that probably will not be enough. A key Piagetian concept is that development involves the process of upsetting or upending one's current stage (and state of equilibrium). Such upending creates dissonance or a state of equilibration. The person attempts to incorporate the new into the old without really changing the old. If one's own "old" way of processing and perceiving experience does not really change then plus ça change! William James referred to this as "old fogeyism," change the new into the familiar. His three-year old child taught James the concept when the child called a corkscrew, "bad scissors" and an egg, a "ball."

New Learning in a developmental sense requires we actually give up the old less adequate, more concrete, less empathic, more stylized system of thought and action. The stability which a less adequate stage may offer can often become an extremely well-entrenched barrier to change. Any effective instructional model must offer major personal support as a direct part of the instruction, not as an indirect service or adjunct "therapy." Separating the person from "old learning" may be similar to the grieving process for some at least. In any case our work with in-service teachers convinces us that significant professional development is painful. Similarly Clyde Parker's (1978) pioneering study of professional adult growth for college level professors clearly suggests the need for careful and continuous support as requisite for change. His work seems to indicate, at least by inference, that the problems of in-service for elementary and secondary teachers pale by comparison with college professors. In any case higher order skills represents the challenge, interpersonal responsiveness/empathy the support.

7. A final point. A person's current stage of psychological development-maturity represents the current preferred mode of functioning--not a permanent classification. Hunt uses the phrase "accessibility channel" to denote the current mode that an individual tends to use. In a generic sense the stage then tells us where to start, to begin where the adult learner is.